

CA2ΦN  
NR 140  
-78D27

Government  
Publications

# The decline of small mineral enterprises in Ontario

**A Critical Issue**  
discussion paper

prepared by  
The Mineral Resources Group,  
Ontario Ministry of  
Natural Resources

*If you can make one heap of all your winnings  
And risk it on one turn of pitch-and-toss,  
And lose, and start again at your beginnings,  
And never breathe a word about your loss;*

.....

*Yours is the Earth and everything that's in it,  
And — which is more — you'll be a Man, my son!*

Rudyard Kipling, "If"  
from *A Diversity of Creatures*

**NOTE:**

The following discussion paper summarizes the various issues concerning the decline of the small mineral enterprise.

A considerable amount of the source material is drawn from the consultants' reports authored by Dr. Andrew J. Freyman and Professors B.A. Kalymon, et al. (reference 1 & 2, pg. 15).

This discussion paper does not represent official policy and the views expressed herein are not necessarily the viewpoint of the Government of Ontario.

August, 1978

5753 (8/78) Second Printing (11/79)



# The decline of the small mineral enterprise: historical inevitability or lost opportunity?

Most Canadians are aware, at least in general terms, of the scope and importance of Canada's mineral extraction and processing industry. Far fewer Canadians understand the role that has been played by smaller enterprises in the development of Canada's and Ontario's mining industries. Few are aware of the dramatic decline that has overtaken the levels of activity by smaller enterprises during the 1970's.

In the past, small enterprises have made significant contributions to the development of the mining industry in Canada. There are those who suggest that the decline of these smaller enterprises is a natural result of the maturing of our industry in Canada and of changes in the international financial and mineral markets. Others suggest that, with appropriate policies from Government and initiatives from private sector, the smaller enterprise could once again become a major contributor to a growing mining industry.

The Mineral Resources Group of the Ontario Ministry of Natural Resources has supported independent research of the past contributions and current and future potential of small mineral enterprises.

Two examples of this independent research have been published, with the financial support of the Mineral Resources Group, in order to help facilitate a broader public discussion of this important issue.\*

The purpose of this critical issue discussion paper is to set out in simplified terms some of the major factors involved in any consideration of the past and future of the small mineral enterprise in Ontario and Canada. Not all of the questions raised in this paper are answered here. It is hoped that, where members of the public have views or opinions with regard to the issues discussed in this paper, they will communicate these views and opinions to the Mineral Resources Group.



NOTE: The Mineral Resources Group supported the publication of these studies in the hope they would stimulate discussion and consideration of the potential of the smaller mineral enterprise. The policy recommendations included in these studies were arrived at independently by the aforementioned consultants, and their reports were published, unedited by the Mineral Resources Group.

\* Andrew J. Freyman, *The Role of Smaller Enterprises in the Canadian Mineral Industry with a Focus on Ontario*, 1978

B.A. Kalymon, *et al*, *Financing of the Junior Mining Company in Ontario*, 1978.

## Section 1

Mining is a big industry in Canada: its total production in 1976 was worth \$8 billion. The value of that mineral production, plus the additional value resulting from metal processing and fabricating in Canada, represents a very significant portion of our total national wealth.

Any reasonable public discussion of the past achievements of smaller mineral enterprises in Ontario, and of their current decline, must begin with an understanding of the importance of mining to the economy of Canada and of Ontario.

### The importance of mining

In 1976, Canada's total production of non-fuel minerals was worth a total of \$8 billion. Ontario's mines alone accounted for 28% of that total, or more than \$2.6 billion worth of metals.\*

Mining is relatively more important to Canada than to virtually any other industrialized nation. It accounts for a greater share of our total production in Canada (Gross National Product) and in Ontario (Gross Provincial Product) than in most other industrialized areas of the world.

### Mining employment

More than 93,000 people are employed in mining across Canada. More than 29,000 of those jobs are located in Ontario. An additional 12,000 Ontario men and women are employed in smelters and refineries.

The employment offered in mineral extraction and processing has generally been stable, long term employment. Increased productivity and capital investment have also permitted mining earnings to continue to compare well with other industrial wages. The average weekly earnings for the period from 1974-77 (preliminary) for people employed in mining, including milling, were \$348.12. This compares with an industrial composite average weekly earning of \$249.95 for the same period.

\*The Ontario Metal Mining Industry — Present and Future. A discussion paper prepared by the Mineral Resources Branch, Division of Mines, Ministry of Natural Resources, February 1977.



# Mining is a leading export industry

In 1976, Canada exported \$6 billion worth of non-fuel minerals. 70% of our total mineral production was exported.

If we consider the value of our total exports of all mineral products in their crude form and in the form of semi-processed or fully refined metals, the total export earnings are even more impressive. In 1974, these total earnings were greater than \$10.7 billion for Canada as a whole and nearly \$2.6 billion for Ontario alone.

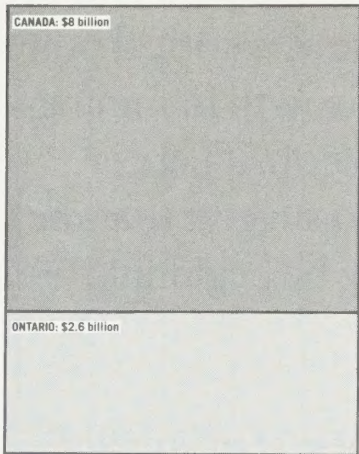
These earnings are a critical part of our total exports. The foreign exchange earned by export sale of minerals and mineral products is important for Canada's balance of payments.

It is by comparison with other nations that the true importance of mineral exports to Canada becomes most clear. We are more than 3 times as dependent on mining for export earnings as the United States is. We are 5 times as dependent as West Germany is.

Mining is a big industry in Canada. As a nation, we are more dependent on mining for the generation of wealth, employment and export earnings than almost any other industrialized nation.

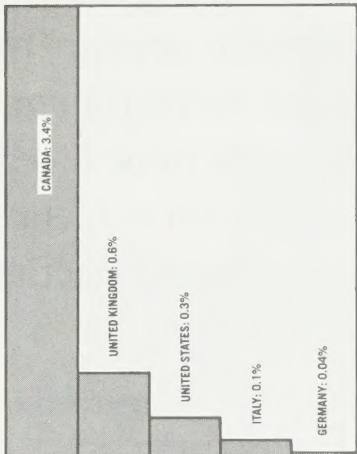
NOTE: Various agencies maintaining statistics — i.e., Ontario, StatCan, the United Nations, etc. — use a variety of definitions for such things as total metal mining earnings and employment. Because of this, some of the quantities shown in graphic examples throughout this publication may appear to be at variance. The relationships they reveal are, however, similar regardless of which of the accepted definitions is used.

TOTAL VALUE OF NON-FUEL MINERALS: CANADA AND ONTARIO.



Source: The Ontario Metal Mining Industry—Present and Future. A discussion paper prepared by the Mineral Resources Branch, Division of Mines, Ontario Ministry of Natural Resources, February 1977.

SHARE OF GNP DERIVED FROM METAL MINING\*

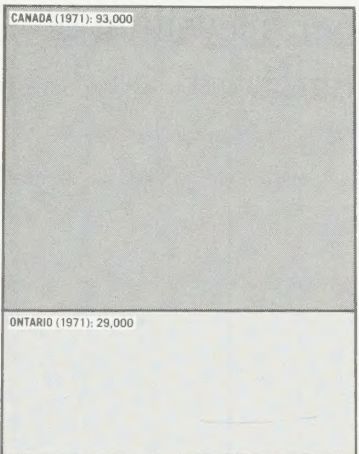


Source: 1975 Yearbook of Industrial Statistics (New York: United Nations, 1977). In order to ensure comparable figures all values are calculated on the basis of International Standard Classifications.

International Financial Statistics, Washington, International Monetary Fund, March, 1978.

\*1974 period, except 1972 for United States.

TOTAL MINING EMPLOYMENT\*: CANADA AND ONTARIO.



\*The mining industry here is composed of metal, non-metal and coal mines.

Source: Andrew J. Freyman, The Role of Smaller Enterprises in the Canadian Mineral Industry with a Focus on Ontario, 1978.

METAL ORE MINING EMPLOYMENT AS SHARE OF TOTAL EMPLOYMENT\*

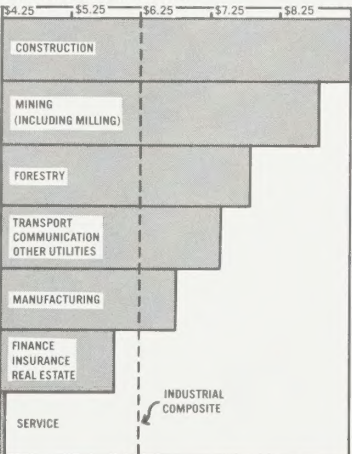


Source: United Nations Statistical Bulletin. These figures refer to employment in Mining and Quarrying. Total employed refers to the average number of all persons engaged during the year, including working proprietors, employees, and unpaid family workers.

Yearbook of Labour Statistics, Geneva: International Labour Office. These are 1974 total employment figures.

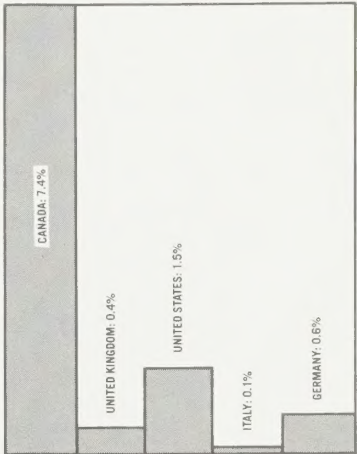
\*1974 period, except 1972 for United States.

AVERAGE HOURLY EARNINGS IN MINING COMPARED TO OTHER INDUSTRIES IN CANADA.



Source: Statistics Canada, Average Weekly Earnings 1974-77 (preliminary).

MINERAL EXPORTS AS PERCENTAGE OF TOTAL EXPORTS (1974)\*



Source: Statistics of Foreign Trade, Trade by Commodities Market Summaries Exports, OECD.

\*Mineral exports are defined as Metalliferous Ore and Scrap Metal.

Mining and mineral processing are critically important for the creation of wealth and employment, and for the earning of export dollars for Canada.



## Section 2

The mining industry in Canada and in Ontario appears to be at a critical point in its development. Growth in mining appears to be levelling off. There is significant evidence to suggest that the industry may actually be beginning to decline.

The prospects for renewal of smaller enterprise activity within the mining industry can only be evaluated within the context of this general levelling of mining activity in Canada.

### **The outlook for mining: an absence of growth**

In 4 out of the 6 years 1969 through 1974 inclusive the rate of growth in total value of metallic mineral production in Canada was actually negative. The value of 1974 production was actually smaller than the value of 1970 production, expressed in constant dollars.

Increasing production from other nations, including especially developing nations, together with slower world-wide demand growth, has led to serious price slumps in many metals.

At the same time, there is serious concern that levels of exploration activity for new mines have been declining significantly.

### **Exploration: higher costs/lower spending**

Exploration costs, expressed as the average cost per economic mineral discovery in Canada, have increased dramatically. Exploration spending by the mining industry does not appear to be keeping pace with those increased costs.

According to one research study\* the average cost per economic mineral discovery in Canada between 1951 and 1955 was \$3.6 million (1977 dollars). That same study calculates the average cost per economic mineral discovery between 1971 and 1975 as \$27.3 million. While this eightfold increase is higher than generally accepted, there is little doubt that exploration costs over this period have increased at least 4 times.

There is equally little doubt that exploration spending has increased much more slowly.

\* Andrew J. Freyman, *The Role of Smaller Enterprises in the Canadian Mineral Industry with a Focus on Ontario*, 1978.

In recent years, exploration spending in Ontario has been declining—not merely in relation to the costs of finding new economic ore bodies—but in absolute terms.

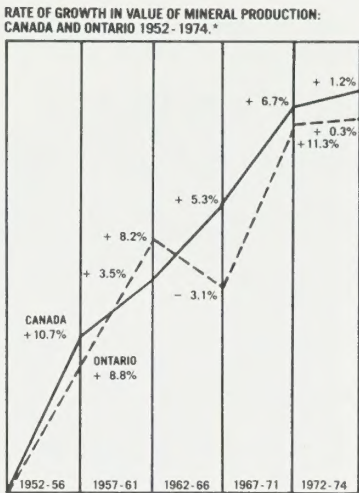
These lower levels of exploration are having predictable results: since 1971 there have been virtually no discoveries in Ontario that seem likely to lead to the development of new operating mines.

## The profit outlook: falling returns

It is generally acknowledged that mining is a relatively risky industry. The returns available on investments in mining more and more fail to reflect that risk. For example, after tax profits in 1975, expressed as return on equity, were only 7.7% for metal mining. This compares with 10.8% for food manufacturing, 11.8% for beverage manufacturing, and over 13% for oil and gas wells.\*

The return available on totally risk-free investments in Government guaranteed CMHC mortgages during 1975 was in excess of 10%.

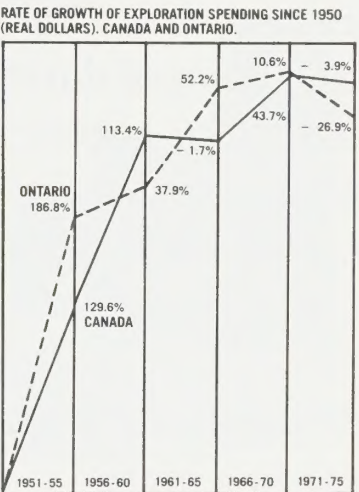
Clearly, falling profitability is one reason for the decline in mineral exploration and development spending in Canada. On the long term it will be impossible to maintain levels of production, employment or export earnings in the industry without increasing levels of exploration and development spending.



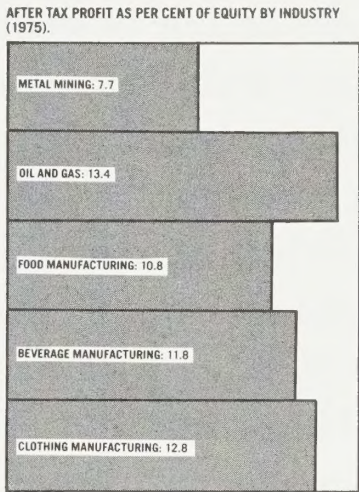
Source: Canadian Minerals Yearbook 1975. Ottawa: Energy, Mines and Resources Minerals, 1978.  
 Statistical Report of the Mineral Industry in Ontario 1971-73 Volume IV-VI. Mineral Economics Section, Mineral Resources Branch, Division of Mines, 1977.  
 Ontario Mineral Review 1975. Ministry of Natural Resources.  
 \*General Wholesale Price Index used to calculate Inflation Multiplier. See Mackenzie and Bildeau Appendix A.



Source: B.A. Kalymon, et al. Financing of the Junior Mining Company in Ontario, 1978.



Sources: Sources and Uses of Funds, The Canadian Non-Ferrous Metal Mining Industry, B. Mackenzie and A. Freyman, EMR, December 1973.  
 Investment Statistics, Statistics Canada Compilations from TSE statistics and OSC statistics.



Source: Statistics Canada Publication 61-003.

Key indicators appear to show that the mining industry in Canada is, at best, in a period of very slow growth.

\* Statistics Canada Publication 61-003.



## Section 3

The 1950's were a period of rapid growth and activity in the mining industry. They were also a period of very extensive and productive activity by smaller mineral enterprises.

Today, levels of exploration and development activity in Canada's mining industry have declined. The activities of small enterprises have virtually ceased. There are two schools of thought about this decline of smaller enterprises. One says that the success they enjoyed during the '50's was a result of unique historical circumstances of the time, and that the decline since has been a natural result of changes in the nature of the industry.

The other school of thought says that the smaller enterprises, by being more flexible and innovative, result in a more efficient approach to mineral exploration and development. This group tends to trade the decline in small enterprise activity to increasing Government regulation and taxation.

### **The record of the smaller mineral enterprise: some evidence of outstanding efficiency**

There is some evidence that smaller enterprises or "junior companies" as they are often called in the mining industry bring a special efficiency to mineral exploration.

According to one research study,\* between 1951 and 1974 the "juniors" spent only 28% of the total funds that were expended on metallic mineral exploration in Ontario, but were responsible for 62% of all economic discoveries.

While it is possible to argue with these specific figures, there is no question that, particularly during the 1950's, smaller enterprises enjoyed high levels of success in their mineral exploration programs.

But Ontario is now a relatively "mature" area in terms of mineral exploration. It is an area that has been widely mapped and explored. The easiest to find mines have already been found. This makes it almost certain that the time involved and the costs for successful exploration programs would be very much higher today, regardless of the size of the enterprise conducting the exploration.

### **The decline in small enterprise activity**

The share of total exploration spending which is attributable to the efforts of smaller enterprises in Ontario has been declining steadily since 1960. In that year, junior companies accounted for 44% of all exploration spending in the Province. In 1974, the junior share was only 18% of total exploration spending. Over that same

\* Andrew J. Freyman, *The Role of Smaller Enterprises in the Canadian Mineral Industry with a Focus on Ontario*, 1978.



period, the amount spent declined from \$58.1 million in 1960 to less than \$40 million in 1974. \*\*

At the same time, the cost of effective exploration programs has been increasing. The average cost per economic discovery between 1961 and 1965 is estimated at \$11.4 million (1977 dollars). The average cost for economic discovery between 1971 and 1975 has climbed to \$27.3 million on a Canada-wide basis.

At the same time, the tremendous cost increases that have overtaken the development of mines and the production of minerals have a dramatic effect on what constitutes an "economic mineral discovery". The value of any discovery must be larger than it was required to be in the past if development of a mine is to be justified.

## The basic dilemma: increasing costs and increasing risks

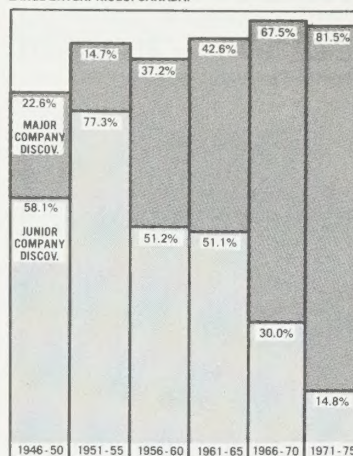
Mineral exploration is a more risky venture today than it was in the past.

At the same time, low returns throughout the industry make it difficult to attract investment, even for large established enterprises. Increasingly, mining companies are relying on debt as opposed to equity financing.

The smaller enterprises have traditionally relied almost entirely on equity financing: raising money through the sale of shares in their enterprise. With their smaller assets and their concentration in the exploration sector, they find it virtually impossible to raise adequate amount of debt capital. This, coupled with a failure to develop effective new means of financing, is a major reason for the decline of these smaller enterprises.

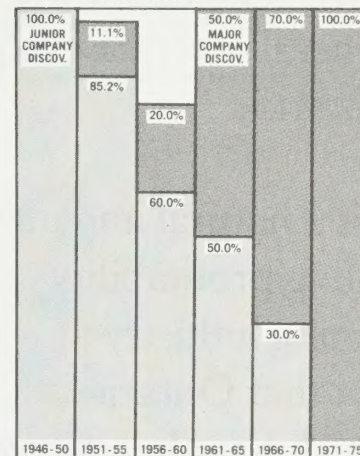
\*\*Andrew J. Freyman, *The Role of Smaller Enterprises in the Canadian Mineral Industry with a Focus on Ontario*, 1978.

SHARE OF TOTAL NUMBER OF ECONOMIC FINDS SMALL AND LARGE ENTERPRISES: CANADA.



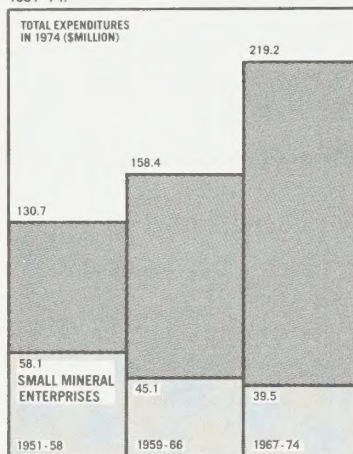
Source: B.A. Kalymon, et al. *Financing of the Junior Mining Company in Ontario*, 1978.

SHARE OF TOTAL NUMBER OF ECONOMIC FINDS SMALL AND LARGE ENTERPRISES: ONTARIO.



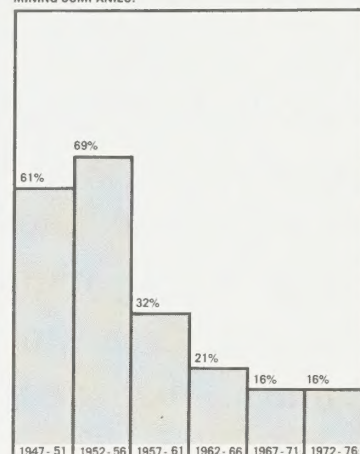
Source: B.A. Kalymon, et al. *Financing of the Junior Mining Company in Ontario*, 1978.

DECLINING SHARE OF TOTAL EXPLORATION SPENDING ACCOUNTED FOR BY SMALL MINERAL ENTERPRISES: 1951-74.



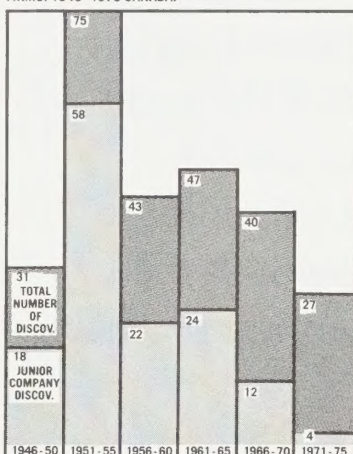
Source: Andrew J. Freyman, *Appendix A: The Contribution of Smaller Mineral Enterprises to Metallic Mineral Exploration in Ontario*, 1978 by Brian W. Mackenzie and Michel L. Blodeau.

SHARE OF ISSUES ABOVE \$500,000 RAISED BY JUNIOR MINING COMPANIES.



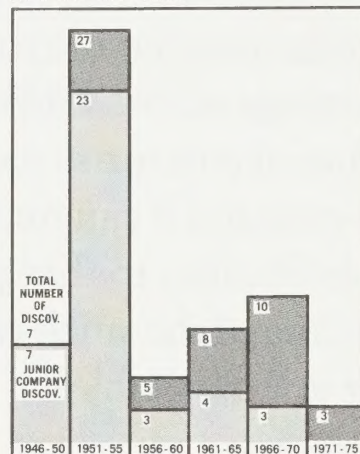
Source: B.A. Kalymon, et al. *Financing of the Junior Mining Company in Ontario*, 1978.

DECLINING DISCOVERIES BY JUNIOR FIRMS AND BY ALL FIRMS: 1946-1975 CANADA.



Source: B.A. Kalymon, et al. *Financing of the Junior Mining Company in Ontario*, 1978.

DECLINING DISCOVERIES BY JUNIOR FIRMS AND BY ALL FIRMS: 1946-1975 ONTARIO.



Source: B.A. Kalymon, et al. *Financing of the Junior Mining Company in Ontario*, 1978.

*Smaller companies have had great success in mineral exploration in the past, particularly during the 1950's. In more recent years, their levels of activity have declined dramatically. The declining ability to raise funds through equity financing is of critical importance.*



## Section 4

What has caused the virtual end of small mineral enterprise exploration activity in Ontario?

Is it a natural and inevitable result of falling profitability and rising costs in the mining industry as a whole? Does the fact that Ontario is a “mature” area which has already been heavily explored mean that there is little opportunity for effective small enterprise activity?

Or has increasing Government regulation, coupled with tax measures that do not adequately recognize the inherently risky nature of the mineral exploration investment, forced the decline in smaller enterprise activity?

Healthy and active mineral exploration is critical to future growth in mining production, employment and export earnings across Canada. If the small mineral enterprise sector can be re-vitalized it can make a significant contribution to that growth. Is the decline of the small enterprise reversible? Or is it inevitable?

### **The decline of the smaller enterprise: reversible or inevitable?**

There are real and uncontrollable factors which have contributed to the decline of the smaller mineral enterprise. The fall in profitability of the mining industry as a whole is one of the most important of those factors. Increasing costs have meant that, to justify development, the value of discoveries must be much higher than was necessary in the past. On the average, mining is simply not as profitable as many other investments offering much surer returns; it is less profitable than investment in manufacturing; often, it has been less profitable than investment in government guaranteed mortgages.

This makes investment in any mining operation, let alone in speculative mineral exploration companies, less attractive. But those who argue that the decline of the smaller enterprise can be reversed point to the opportunities for quite spectacular returns that still exist in certain mineral groups. They claim that, even in today's high cost climate, a highly effective exploration program can be mounted with a budget of less than \$1 million a year. And they point out that many smaller enterprises have had such budgets in the past.

According to those who believe the smaller enterprise can be revitalized the real causes of the decline lie in excessive Government regulation and in the tax structure which simply refuses to acknowledge the high risk and the social desirability of small enterprise mineral exploration.

During the 1950's, successful small mineral enterprises were able to pay very high returns to their investors. These high returns, coupled with the high level of activity in exploration and in speculative mining shares, led to a certain level of excitement in the stock market. (However,



as incidents of discoveries began to fall off in the early '60's, there was also a significant increase in the number of near fraudulent promotions of junior mining issues.)

These abuses of the equity market led to a public outcry that, in 1967 caused the Government of Ontario to amend the Ontario Securities Act and that also led the Toronto Stock Exchange to adopt a strict set of restrictions on junior mining issues.

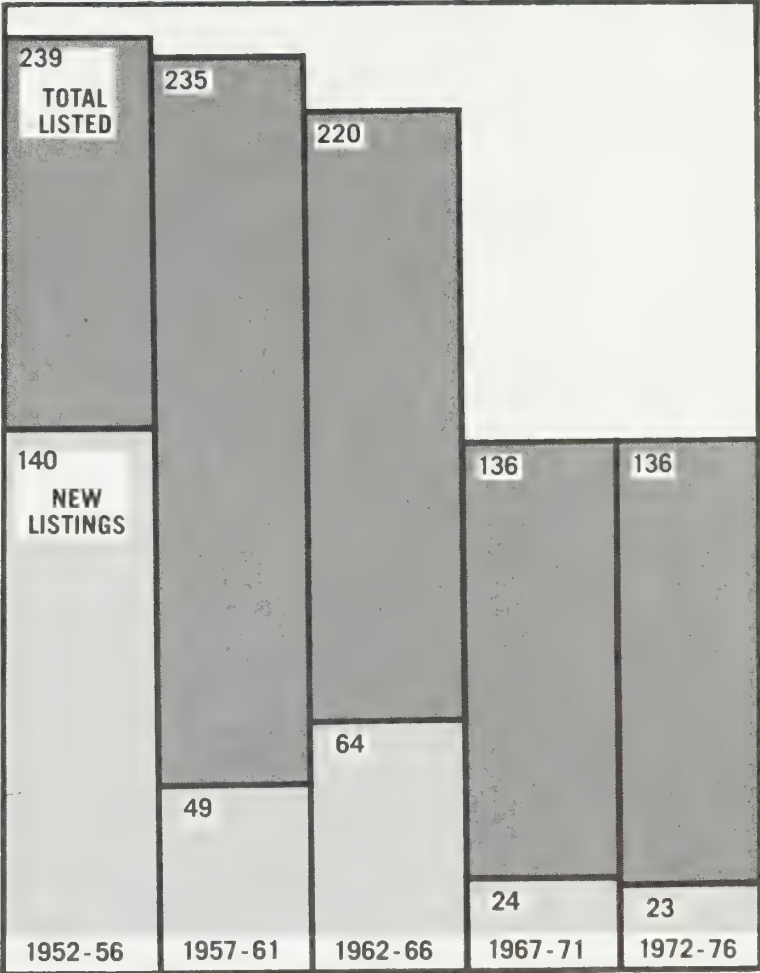
The objective of these measures was to prevent the fraudulent or near fraudulent promotion of junior mining issues in Ontario. According to many of those who believe that smaller enterprise activity can be revitalized, an inadvertent side effect of these regulative measures has been a tremendous decline in effective access to equity financing on the part of even the most honest, well-founded and well-managed junior enterprises.

Among the specific restrictions that are most difficult for smaller enterprises to comply with are:

- (a) the requirement that any company have a **minimum** of \$500,000 in working capital as a pre-condition for listing on the Toronto Stock Exchange; and
- (b) the requirement that the firm maintain a minimum of \$25,000 in **net liquid assets** at all times or be de-listed; and
- (c) the requirement that the firm continue exploration or development activities at all times or suffer automatic delisting; and
- (d) extremely onerous information filing requirements.

These requirements do appear to have succeeded in preventing the fraudulent promotion of junior mining issues in Ontario. Proponents of small mineral enterprise activity, however, claim that

**NUMBER OF NEW LISTINGS OF JUNIOR MINING COMPANIES AND TOTAL JUNIOR MINING LISTINGS ON THE TSE: 1950 - 1976.**



Source: B.A. Kalymon, et al, **Financing of the Junior Mining Company in Ontario, 1978.**

*Fewer small mineral enterprises are successfully raising equity capital today. The tax treatment afforded investments in small mineral enterprises is less generous than that afforded such investments as oil and gas exploration and development activities and multi-unit residential buildings. Would changed regulation or changed tax treatment help reverse the decline of the small mineral enterprises?*

they have also effectively closed the equity market to most smaller enterprises.

One other change which has affected the access of smaller mineral enterprises to the equity market has been the firm restrictions placed on the use of stock options. In the past options were often used to provide brokers and underwriters with access to equity positions in the newly listed firm and with a corresponding incentive to promote the new issues vigorously. Between 1961 and 1965, for instance, it is estimated that 28.7% of all funds raised for mining company shares on the TSE were underwritten by firms enjoying attractive option positions. Between 1971 and 1975, less than 1% of such funds were raised in that way.\*

There are serious questions within the investment community as to the desirability of a return to a broader use of options to promoters in the underwriting of shares in small mineral enterprises. By their nature, the options provide an incentive to attempt to drive up the price of the shares on a timetable determined by the length of the option period rather than by the activities of the firm. This has led to abuses in the past.

While there can be little doubt that such requirements as the minimum \$500,000 working capital requirement are burdensome for many smaller enterprises, it is difficult to argue that any change will dramatically affect the amounts of money available for the purchase of equity in smaller mineral enterprises as long as the investments are perceived to be extremely risky and the profit opportunities, compared with others available to the investor, are perceived to be inadequate.

## **The taxation of small mineral enterprise investments: no reflection of risk or social desirability**

Where Governments have judged that relatively risky or low return investment activity is in the public interest, they have, in several cases, responded with the special tax treatment of investment in such activities.

Oil and gas exploration is one recent example where a special tax policy has been applied successfully to, in effect, offset the risks involved and, to a degree, to enrich the returns available. The building of multi-unit residential premises has been encouraged by a special tax treatment to make investment in such units more attractive.

Although some tax measures, including the Ontario Government's graduated tax system, do provide substantial benefits for smaller operating mining companies, there are no tax provisions to offset the exceptionally risky nature of **individual investments** in small mineral exploration concerns.

Those who believe the decline of smaller mineral enterprise activity can be reversed say that such tax treatment should be applied to investments in this category. They point to the social desirability of a continued growth in mineral production, employment and export earnings in Canada, and to the critical role played by smaller enterprises in exploration activity in the past — particularly during the 1950's. Such tax treatment, they argue, is the best way to assure a dynamic, flexible and efficient program of ongoing mineral exploration across Canada.

\* Andrew J. Freyman, *The Role of Smaller Enterprises in the Canadian Mineral Industry with a Focus on Ontario*, 1978.



Making the capital outlay for the purchase of stock in high risk exploration enterprises entirely or partially tax-deductible is one alternative which has been suggested. Permitting unlimited (by time) loss carryover from exploration investments, and permitting deductibility from other corporate or personal income is another tax incentive that has been suggested. Removal or diminution of the capital gains tax on returns from mineral exploration ventures has also been suggested as an alternative which, while resulting in a relatively small loss of revenue by Government, would permit returns much more in keeping with the high risk nature of these investments to be achieved.

### **Small mineral enterprise response to difficulties: a lack of clear action**

The small mineral enterprise sector has been remarkably unorganized. There has been little effective or consistent political or lobbying action by such enterprises in Ontario or in Canada in the face of what they consider to be crippling changes in equity financing regulations or in the face of what they consider to be unfair taxation.

In addition, there is little tradition within the industry of anything approaching self-policing. Although at one point the Association of Professional Engineers did work on standards to be applied to junior mining ventures, there has been no general indication by the industry that it acknowledged the seriousness of the general public demand for protection against dishonest investment vehicles.

The lack of clear action to deal with the controllable or political parts of the difficulties encountered by small mineral enterprises is duplicated by a lack of action

on their part to deal with changed factors in the business environment.

Diminished access to equity financing is not solely the result of more stringent regulation. The investment community is less active in the area of high risk securities today. Regardless of changes in the restrictions on equity financing, there would seem to be a clear need for the small mineral exploration enterprise community to explore alternative methods of financing. There has, however, been little purposeful effort to explore new techniques for project marketing or for the raising of venture capital. **Such promising areas as the raising of "tax write-off" money or the use of limited partnerships have simply not been seriously examined.**

To a degree, this slow change on the part of the small mineral enterprise community is a natural result of the fact that these enterprises are small; individually they lack the resources to mount effective public information campaigns or broadly based examinations of financial alternatives. Despite these facts, it would appear likely that a more organized approach by the industry would be critically important to any efforts to reverse the decline which has overtaken small mineral enterprise exploration activities in Canada.

## Section 5

Mining is critically important to Ontario and Canada.

The mining industry as a whole is no longer growing at the rate that it did in the past.

Activity by smaller mineral exploration companies has virtually ceased in Canada.

The continued growth in production, employment and export income from Canada's mines depends on the most efficient and effective possible exploration activity across the country.

Is it possible to reverse the decline in exploration activity by smaller mineral enterprises by changes in equity financing restrictions or in tax laws? Would such changes serve the public interest?

## The critical issue

What action ought to be taken? By the Government of Ontario? By the Government of Canada? By those responsible for the operation of the Stock Exchange? By the industry itself?

In this discussion paper, we have indicated areas where possible action should be examined. We hope this information can help provide the basis for a reasoned and informed public consideration of the causes, consequences and possible responses to the decline in the levels of activity of small mineral exploration enterprises in the mining industry of Canada and of Ontario.

The slowing of growth in the mining industry, and the dramatic decline in small enterprise activity in the industry, are critical issues that must be addressed by Government today.

In this discussion paper, we have outlined the questions that must be resolved before Ontario can adopt a coherent and effective policy towards smaller mineral enterprises. It is hoped that people throughout Ontario will communicate their views, suggestions and recommendations to the Mineral Resources Group of the Ministry of Natural Resources.





Those wishing further technical or background information may find the following publications of interest.

### References:

1. Freyman, Andrew J.: The Role of Smaller Enterprises in the Canadian Mineral Industry with a Focus on Ontario, 1978.
2. Kalymon, B.A., P.J. Halpern, J.D. Quirin, and W.R. Waters. Financing of the Junior Mining Company in Ontario, 1978.
3. The Ontario Metal Mining Industry — Present and Future. A discussion paper prepared by the Mineral Resources Branch, Division of Mines, Ministry of Natural Resources, February 1977.

### Bibliography:

*Ontario Ministry of Natural Resources  
Mineral Resources Branch  
Mineral Policy Background Papers*

No. 1: G. Anders, W. P. Gramm, S. C. Maurice: The Impact of Taxation and Environmental Controls on the Ontario Mining Industry — A Pilot Study, 1975.

No. 2: Staff, Metallic Minerals Section, Mineral Resources Branch: Towards an Iron Ore Policy for the Province of Ontario, 1975.

No. 3: K. S. Rachamalla, D. H. Bell: Towards a Zinc Policy for the Province of Ontario, 1976. 5509 (11/76).

No. 4: T. P. Mohide, C. L. Warden, J. D. Mason: Towards a Nickel Policy for the Province of Ontario, 1977. 5692 (12/77).

No. 5: G. Anders, W. P. Gramm, S. C. Maurice, C. W. Smithson: Investment Effects on the Mineral Industry of Tax and Environmental Policy Changes: A Simulation Model. 5745 (08/78).

Publications of the Ontario Mineral Resources Group and price list are obtainable through the Public Service Centre, Ontario Ministry of Natural Resources, Parliament Buildings, Queen's Park, Toronto, Ontario and The Ontario Government Bookstore 880 Bay Street, Toronto, Ontario

3 1761 11547042 9



Ministry of  
Natural  
Resources

Hon. James A. C. Auld  
Minister

Dr. J. K. Reynolds  
Deputy Minister